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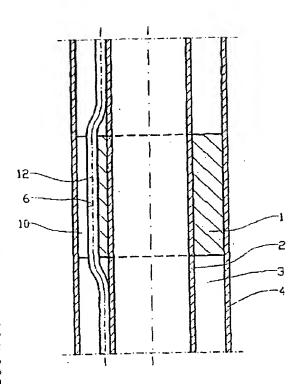
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[Communed on next page]

(54) Title: A CABLE DUCT DEVICE IN A SWELLING PACKER



(57) Abstract: A cable duct device in a swellable packer (1) of the kind in which the packer (1) is adapted to be able of sealing an annulus (3), and in which the swellable packer (1) is provided with at least one opening (6) therethrough adapted to constitute a duct for a cable (12).

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before the expiration of the time limit for amending the claims and to be republished in the event of receipt of For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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|  |   |   | , 555,125             |  |  |  |  |  |
|--|---|---|-----------------------|--|--|--|--|--|
| A. CLASSIFICATION OF SUBJECT MATTER  |   |   |                       |  |  |  |  |  |
| IPC7: E21B 23/06 According to International Patent Classification (IPC) or to both national classification and IPC   |   |   |                       |  |  |  |  |  |
| B. FIELDS SEARCHED   |   |   |                       |  |  |  |  |  |
| Minimum documentation searched (classification system followed by classification symbols)  |   |   |                       |  |  |  |  |  |
| IPC7: E21B   |   |   |                       |  |  |  |  |  |
| Documentat   | ion searched other than minimum documentation to the  | extent that such documents are included j | n the fields searched |  |  |  |  |  |
| SE,DK,FI,NO classes as above   |   |   |                       |  |  |  |  |  |
| Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)   |   |   |                       |  |  |  |  |  |
| WPI DATA, EPO-INTERNAL   |   |   |                       |  |  |  |  |  |
| C. DOCUMENTS CONSIDERED TO BE RELEVANT   |   |   |                       |  |  |  |  |  |
| Category*  | Citation of document, with indication, where app  | Relevant to claim No.                     |                       |  |  |  |  |  |
| Х  | US 6173788 B1 (JEFFREY J. LEMBECKE ET AL), 1-5<br>16 January 2001 (16.01.2001), See whole document            |   |                       |  |  |  |  |  |
|  |   |   |                       |  |  |  |  |  |
| X  | US 3899631 A1 (BILLY E. CLARK),<br>(12.08.1975), see wole docum   | 1-5                                       |                       |  |  |  |  |  |
|  |   |   |                       |  |  |  |  |  |
| A  | US 6135210 A1 (OLEGARIO S. RIVAS<br>(24.10.2000), column 4, line<br>line 20                                   | 1-5                                       |                       |  |  |  |  |  |
| A  | <br>US 2242166 A1 (E. O. BENNETT), 1<br>(13.05.1941), figures 3-4   | 1-5                                       |                       |  |  |  |  |  |
|  | (10.03.1371), 1190103 3 7   |   |                       |  |  |  |  |  |
|  |   |   |                       |  |  |  |  |  |
|  |   |   |                       |  |  |  |  |  |
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| to be of particular relevance the principle or theory underlying the invention   |   |   |                       |  |  |  |  |  |
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Information on patent family members

PCT/NO 2003/000410

| US | 6173788 | B1 | 16/01/2001 | GB<br>GB<br>NO<br>NO | 2336170 A,B<br>9907757 D<br>315437 B<br>991638 A | 13/10/1999<br>00/00/0000<br>01/09/2003<br>08/10/1999 |
|----|---------|----|------------|----------------------|--|--|
| US | 3899631 | A1 | 12/08/1975 | NONE                 | -  |  |
| US | 6135210 | A1 | 24/10/2000 | CA<br>GB<br>GB       | 2277566 A<br>2339816 A,B<br>9915984 D            | 16/01/2000<br>09/02/2000<br>00/00/0000               |
| US | 2242166 | A1 | 13/05/1941 | NONE                 |  |  |